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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,273	03/25/2004	Christopher Brockett	M61.12-0618	2161

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EXAMINER	
SHAH, PARAS D	

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/811,273	BROCKETT, CHRISTOPHER	
	Examiner	Art Unit	
	Paras Shah	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/24/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the Application filed on 03/25/2004. Claims 1-15 are pending and have been examined.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 02/24/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. Claim 1 is objected to because of the following informalities: "the transliteration relationships" in line 7 should be "a transliteration relationship" Appropriate correction is required.

4. Claims 2-7 are objected to as being based upon an objected to claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Lee *et al.* ("Acquisition of English-Chinese Transliterated word Pairs from Parallel Aligned Texts using a Statistical Machine Transliteration Model").

As to claim 1, Lee *et al.* teaches a method of training a transliteration processing system, comprising:

receiving a set of word pairs from different languages (see page 99, Figure 3 and sect. 3, left column, 2nd paragraph); and

using statistical textual alignment (see page 98, left column, step 1-step 3). to align characters of each of the word pairs (see page 97, left column last paragraph, line 5-right column, lines 1) (e.g. The characters are used for alignment); and

identifying the transliteration relationships (see page 99, Figure 3, and page 99, right column, 1st paragraph) (e.g. Once the proper names have been extracted and aligned based on the aligned characters, the transliteration can be retrieved).

As to claim 2, Lee *et al.* teaches,

using statistical textual alignment to align words in parallel sentences to form a set (see page 99, left column, sec. 3, 2nd paragraph and Figure 3) (e.g. A statistical alignment is used to align the sentences).

As to claim 3, Lee *et al.* teaches,

identifying aligned word pairs from the set of sentences (see page 99, Figure 3, and left column, 2nd paragraph) (e.g. Identification of aligned pairs is carried out).

As to claim 4, Lee *et al.* teaches,

using the transliteration relationships to identify additional word pairs from the set of sentences (see page 98, right column, steps 1-page 99, left column, steps 2 and 3) (e.g. Form the cited section parameters are estimated depending on the word pairs found in the training set. Hence, it isevident that transliteration relationships are used based upon parameters found during training and then applied to the word pair).

As to claim 5, Lee *et al.* teaches,

calculating an alignment model based on the transliteration relationships identified (see page 98, left column, steps 1-3 and right column step 1-page 99, left column step 3) (e.g. From the cited sections, it is seen that the parameters are updated for the model based upon the current model for the word pair. Hence, the training of the previous word pairs is applied to the next word pair that may be unknown to the data set).

As to claim 6, Lee *et al.* teaches,

receiving an input text (see page 101, left column, sect. 4.1, lines 11-15); and

generating a transliteration of the input text (see page 101, left column, sect. 4.1, lines 11-12, Table 1, and page 101, right column, 3rd paragraph, last four lines) based on the alignment model (e.g. The transliteration is done based on the alignment model (see page 98, left column, steps 1-3 and right column step 1-page 99, left column step 3)).

As to claim 7, Lee *et al.* teaches wherein calculating the alignment model based on the transliteration relationships identified includes

using the context supplied by neighboring characters (see page 100, sect. 3.1, R1 and R2) (e.g. It is see that in the former citation that words that can be transliterated into more than one word can be distinguished by the use of a common list. Further, the latter citation identifies characters, which do not belong to the character set. Probability distributions are used to identify such circumstances).

As to claim 8, Lee *et al.* teaches a transliteration processing system, comprising

a textual alignment component configured to receive a set of sentences (see page 99, , left column, sec. 3, 2nd paragraph and Figure 3) and identify transliteration relationships between words in the set of words based on alignment of characters of the words (see page 99, Figure 3, and page 99, right column, 1st paragraph) (e.g. Once the proper names have been extracted and aligned based on the aligned characters, the transliteration can be retrieved).

As to claim 9, Lee *et al.* teaches wherein

the textual alignment component is configured to generate an alignment model (see page 98, left column, 1st paragraph and steps 1-3) based on statistical alignment (see page 98, left column, step 1- step 3). of the characters of the words (see page 97, left column last paragraph, line 5-rught column, lines 1) (e.g. A alignment component algorithm exists).

As to claim 10, Lee *et al.* teaches wherein the textual alignment component

is configured to generate the alignment model based on statistical alignment of the characters (see page 97, left column last paragraph, line 5-rught column, lines 1) of the words including using the context supplied by neighboring characters (see page 100, sect. 3.1, R1 and R2) (e.g. It is

see that in the former citation that words that can be transliterated into more than one word can be distinguished by the use of a common list. Further, the latter citation identifies characters, which do not belong to the character set. Probability distributions are used to identify such circumstances).

As to claim 11, Lee *et al.* teaches

a text aligning component configured to access a database and align sentences of parallel texts (see page 99, Figure 3 and page 101, sect. 4.1, lines 12-15) (e.g. It is implied that in order to carry out the experiment the following was stored in a database).

As to claims 12 and 13, Lee *et al.* teaches,

a data store storing the database (see page 99, Figure 3 and page 101, sect. 4.1, lines 12-15) (e.g. It is inherent that the parallel corpus is stored in memory or a data store in order to execute the experiment).

As to claim 14, Lee *et al.* teaches,

a transliteration generator, receiving a textual input (see page 101, left column, sect. 4.1, lines 11-12, Table 1, and page 101, right column, 3rd

paragraph, last four lines) and generating a transliteration of the textual input based on the transliteration relationships (e.g. The transliteration is done based on the alignment model (See page 98, left column, steps 1-3 and right column step 1-page 99, left column step 3)).

As to claim 15, Lee *et al.* teaches a transliteration processing system, comprising:

a transliteration generator receiving a textual input and generating a transliteration of the textual input (see page 101, left column, sect. 4.1, lines 11-12, Table 1, and page 101, right column, 3rd paragraph, last four lines) based on a transliteration relationship received from a textual alignment (e.g. The transliteration is done based on the alignment model (see page 98, left column, steps 1-3 and right column step 1-page 99, left column step 3)).component configured to receive a set of sentences (see page 102, Table 1) and identify transliteration relationships between words in the set of sentences based on statistical alignment of characters in the words in the form of machine translation models (see page 102, Table 1 and page 98, left column, steps 1-3 and right column step 1-page 99, left column step 3) (e.g. It is seen that the sentences from the input text are aligned. Then the transliterations are extracted depending on the alignment of characters. Hence, the parameters used in the alignment

serves as a basis for other word pairings and result in transliteration relationships.)

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fushimoto (US 5,541,837) is cited to disclose translating a result as a result of translation. Davis *et al.* (5,640,587) is cited to disclose a rule-based transliteration system. Nii (US 5,659,765) is cited to disclose a machine translation using bilingual correspondences. Kang (US 6,810,374) is cited to disclose a bidirectional transliteration for Korean and English language. Mestre (US 6,999,915) is cited to disclose a translation decide for changing the phonetic forms. Al-Onaizan *et al.* (US 20030191626) is cited to disclose a transliteration of named entities based upon pronunciation and spelling.

The NPL document by Kang *et al.* ("Automatic Transliteration and Back-Transliteration by Decision Tree Learning") is cited to disclose transliteration using character alignment and decision tree learning. AbdulJaleel *et al.* ("Statistical Transliteration for English-Arabic Cross Language Information Retrieval") is cited to disclose a statistical technique for training English to Arabic transliteration from word pairs. Utsuro *et al.* ("Bilingual Text Matching using Bilingual Dictionary and Statistics") is cited to disclose sentence alignment and word pair extraction from bilingual text.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paras Shah whose telephone number is

(571)270-1650. The examiner can normally be reached on MON.-THURS. 7:30a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

08/21/2007

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